UNITED STATES DISTRICT COURT EASTERN DISTRICT OF MICHIGAN SOUTHERN DIVISION

NORGREN AUTOMOTIVE, INC.

Plaintiff,	
	CASE NUMBER: 01-72068

v. HONORABLE ARTHUR J. TARNOW

SMC CORPORATION OF AMERICA,

Defendant.	
	/

OPINION AND ORDER¹

This case concerns two patents, United States Patent No. 4,905, 973 ("the '973 patent") and United States Patent No. 5,575,462 ("the '462 patent"), issued to John Blatt and currently assigned to Plaintiff Norgren Automotive, Inc. ("Norgren"). Both patents involve rotary power clamps. Norgren contends that the Defendant, SMC Corporation of America ("SMC"), sells a clamp that infringes both the '973 and '462 patents.

After receiving initial claim construction briefs, the Court held a *Markman* hearing on September 11, 2002 and took the matter under advisement. The parties submitted post-hearing claim construction briefs on November 1, 2002, and

¹ Law Clerk Amy Harwell provided quality research assistance.

subsequently, both parties submitted responses.² The case is now before the Court to interpret the claim language as a matter of law.

I. BACKGROUND

The following is taken from the Plaintiff's initial claim construction brief:

Rotary power clamps are well known within the automotive and manufacturing industries. Such rotary power clamps typically translate linear actuator reciprocating movement into angular rotary movement of a clamp arm for clamping a workpiece to a workpiece-holding fixture. The linear actuator movement is provided by a linear actuator powered by a fluid motor, such as a pneumatic cylinder. The linear actuator drives a piston rod which is pivotally connected to a linkage assembly. The linkage assembly is also connected to the clamp arm wherein the linkage assembly converts the linear reciprocating movement of the piston rod into rotary motion of the clamp arm. Normally, when the fluid motor retracts the piston rod to a retracted position, the clamp arm is in a released position, that is, the clamp arm is removed from the workpiece and the workpiece-supporting fixture. When the fluid motor actuates the piston rod into the extended position, the clamping arm is pivotally moved into a clamping position to clamp the workpiece and hold and/or locate the workpiece against the work-supporting surface.

Various guide and linkage mechanisms have been proposed to correctly translate the linear reciprocating movement of the piston rod to correct the swinging movement of the clamp arm into or out of a clamping position, seeking to obtain the highest mechanical advantage which can be utilized within the power stroke of the fluid cylinder. John A. Blatt recognized and

² The Defendant's response was received by the Court on November 12, 2002. It was filed on December 4, 2002 after the Court issued an order dated December 3, 2002. The Order accepted Defendant's brief for filing and allowed the Plaintiff to file a response as well. The Plaintiff's response was filed on November 25, 2003.

developed many unique and novel power clamp designs that led to significant advantages, both functionally and commercially. Some of these designs are protected by [patents '473 and '973], both currently assigned to Norgren Automotive, Inc.

The claims of the '973 and '462 patents call for several elements; however, the focus of each respective patent is different. In the '973 patent, it is an internal stop which positions the clamp arm in a predetermined location upon reaching the clamped position. The stop is connected to or is essentially integral with the clamp arm so that any "slop" created by wear in the linkage assembly will not affect the position of the clamp arm in the clamped position. In addition, the interior location of the stop prevents any foreign matter from affecting the function of the stop.

The '462 patent focuses on a reset button located in the end of the power clamp. When the power clamp is in the clamped position, the actuation forces are often so great that when power is lost to the power clamp in the clamped position, the clamp arm cannot be manually moved from the clamp position. Such movement is often desired to release a workpiece from the clamped position. In order to release the clamp arm from the clamped position upon loss of power, the '462 patent provides a reset button which when hit, drives the linkage assembly toward the unclamped position. Once the linkage assembly has been moved from the clamped position, the actuation forces are greatly reduced, and the clamp arm can be manually moved toward the unclamped position.

(P's Brief at 2-4).

II. STANDARD OF REVIEW

Title 35 U.S.C. § 271(a) states: "whoever without authority makes, uses, sells, or offers to sell any patented invention, within the United States or imports into the United States any patented invention . . . , infringes the patent."

Adjudication of a patent infringement action requires a two-step analysis. First, the Court must interpret the claim in what is known as a *Markman* hearing.³ Claim interpretation is an issue of law reserved for the Court. *Id.* at 979; *see also Fromson v. Anitec Printing Plates, Inc.*, 132 F.3d 1437, 1441-42 (Fed. Cir. 1997), *cert. denied*, 525 U.S. 817 (1998). Once the claim has been interpreted, the second step is an infringement analysis, or determining whether the claims as interpreted encompass the accused device. *Mannesman Demag Corp. v. Engineered Metal Products*, 793 F.2d 1279, 1282 (Fed. Cir. 1986). Infringement is an issue of fact, which in this case has been reserved for a jury.

At a *Markman* hearing, the Court must examine and resolve disputes over the meaning and scope of technical words or terms of art used in the patent. To interpret the disputed claims, the Court must look first to the patent's intrinsic evidence, which consists of the claims themselves,⁴ the specification,⁵ and the

³ Markman v. Westview Instruments, 52 F.3d 967, 976 (Fed. Cir. 1995) (en banc), aff'd., 517 U.S. 370 (1996).

⁴ "[T]he claims define the scope of the right to exclude; the claim construction inquiry, therefore, begins and ends in all cases with the actual word of the claim." *Renishaw PLC v. Marposs Societa per Azioni*, 158 F.3d 1243, 1248 (Fed. Cir. 1998). *See also Abtox, Inc. v. Exitron Corp.*, 122 F.3d 1019, 1023 (Fed. Cir. 1997) ("[T]he language of the claim frames and ultimately resolves all issues of claim interpretation."). Generally, "all terms in a patent claim are to be given their plain, ordinary and accustomed meaning to one of ordinary skill in the relevant art." *Rexnord Corp. v. Laitram Corp.*, 274 F.3d 1336, 1342 (Fed. Cir. 2001).

⁵ The specification is a written description of the invention and may act as a dictionary for claim-construction purposes to define terms used in the claims. *Markman*, 517 U.S. at 373; *Anderson v. International Engineering and Manufacturing, Inc.*, 160 F.3d 1345, 1348 (Fed. Cir.

prosecution history.⁶ *Markman*, 52 F.3d at 979; *Minnesota Mining and Mfg. Co. v. Johnson & Johnson Orthopedics, Inc.*, 976 F.2d 1559, 1566 (Fed. Cir. 1992). If the claim's meaning is clear from the intrinsic evidence, it is improper for the Court to look beyond the intrinsic evidence to other sources. *Vitronics Corp. v. Conceptronic, Inc.*, 90 F.3d 1576, 1583 (Fed. Cir. 1996).⁷ However, extrinsic evidence, such as general or technical dictionaries, expert testimony, inventor testimony, technical treatises, and articles, may be employed to assist the Court in understanding unfamiliar technology. *Id.* at 1584-85; *Markman*, 52 F.3d at 981. Extrinsic evidence, though, must not be used for the purpose of varying or contradicting the terms of the claims. *Vitronics*, 90 F.3d at 1584.

III. ANALYSIS

^{1998) (&}quot;A word describing patented technology takes its definition from the context in which it was used by the inventor.").

⁶ The prosecution history is a record of the examination of the application before the United States Patent and Trademark Office. *SSIH Equip.*, *S.A. v. United States Int'l. Trade Comm.*, 718 F.2d 365, 376 (Fed. Cir. 1983).

⁷ The Court notes that, in the very rare case where claim's meaning is still unclear after review of the intrinsic evidence, it is permissible for the Court to look to extrinsic evidence for help in construing the claim terms. *Vitronics*, 90 F.3d at 1585. However, extrinsic evidence, especially opinion testimony, is less objective than intrinsic evidence and should be treated with the utmost caution. *Id*.

The Court finds that this is not the rare case where it was necessary to resort to extrinsic evidence because the intrinsic evidence was sufficient. While both sides presented an expert witness in this case, the Court has not relied upon that testimony for construing the claim's terms. Rather, to the extent the Court utilized the expert testimony, it was only for the purpose of familiarizing itself with the underlying technology.

As noted above, there are two patents at issue, the '973 and the '462 patents. The parties have narrowed the areas of contention substantially, leaving only a handful of terms to interpret, including "lever arm," "internal," "stop," and "resetting means." Each patent will be addressed separately below.

A. '973 Patent

Plaintiff alleges the Defendant infringed Claims 1, 3, 4, 6, and 8-14 of the '973 patent. In particular, the Plaintiff has asked the Court to interpret "lever arm," "internal," and "stop." The Defendant lumps all those terms together and asks the Court to interpret the phrase "stop on the lever arm engageable with the housing."

Taking the easiest argument first, the Court agrees with the Plaintiff that there is no need for the Court to define the term "stop." Neither side disputes

⁸ The description of the stop varies only slightly between claims:

[•] Claim 1 states "a stop formed on said lever arm of said pivot pin engageable with said housing when said clamp arm is in said clamping position." '973 patent, Col. 5, Lns 1-4.

[•] Claim 4 states "a stop formed on said lever arm means of said pivot pin means engageable with an internal surface of said enclosure when said clamp arm is in said clamping position." '973 patent, Col. 6, Lns 2-6.

[•] Claim 8 states "a stop formed on said lever arm of said pivot pin engageable with an internal surface of said enclosure." '973 reexamination certificate, Col. 1, Lns 42-43.

[•] Claim 9 states that the lever arm and stop "are completely enclosed within said enclosure." '973 reexamination certificate, Col. 1, Lns 61-62.

[•] Claim 10 states "a stop formed on said lever arm of said pivot pin engageable with an internal surface of said enclosure when said clamp arm is in said clamping position." '973 reexamination certificate, Col. 2, Lns 34-36.

[•] Claim 13 recites the same language used in claim 1. '973 reexamination certificate, Col. 3, Lns 4-6.

[•] Claim 14 recites the same language used in claim 4. '973 reexamination certificate, Col.

that, under the plain language of the patent – "a stop formed on said lever arm" – the stop must be on the lever arm. Also, neither side disagrees that the stop must be "engageable with said enclosure." Rather, the dispute is over whether the SMC clamp's stop is formed on the lever arm and whether the stop engages with the enclosure, which are patent infringement questions for the jury.

The first real point of contention, then, is what constitutes the lever arm.

The Plaintiff proposes that the lever arm should be interpreted as "an elongated element having a pivoting end, a moment arm, and an actuating end." The Defendant proposes adding that the lever arm should be "disposed between the link and the pin portion of the pivot pin." In practical terms, the Plaintiff believes that the lever arm, referred to as 62 in the drawings, includes the area surrounding the pin (74). The Defendant argues that the lever arm ends at the pin.¹⁰

The Court again agrees with the Plaintiff's position because the Defendant's position is simply untenable. Defendant's argument that the lever arm stops at the

^{4.} Lns 24-27.

⁹ In certain parts of their pleadings, it might appear that the parties disagree whether the term should be "housing" or "enclosure." *See* Defendant's Reply Brief at 4. However, upon closer inspection, both parties think the terms to be synonymous. *See* Plaintiff's Reply Brief at 8. Thus, the Court will also consider them synonymous and interchangeable.

¹⁰ The difference between the two positions is most easily demonstrated by looking at Plaintiff's Exhibit 7, where Plaintiff has painted the part it believes to be the lever arm orange, and Defendant's slide 2, part of Exhibit 99, where Defendant has colored its definition of the lever arm blue.

pivot pin, rather than extending around the pivot pin, fails for two reasons. First, without extending around the pivot pin, the lever would not actually provide leverage, which is an illogical result. Second, there is nothing in the claims themselves, the specification, or the prosecution history to support Defendant's interpretation. The specification, for example, recites that "[a] pin 74 engages through aperture 72 in the lever arm 62." The use of the word "through" demonstrates that the lever arm extends beyond the pivot pin. Therefore, the Court construes the lever arm as being "an elongated element having a pivoting end, a moment arm, and an actuating end." '973 patent, Col. 3, Lns. 50-51. However, as urged by the Defendant, the Court notes that the patent specifies that the lever arm must extend internally within the enclosure, while the pivot pin is the structure that extends externally from the housing. See, e.g., '973 patent, Col. 4, Lns. 58-60 ("[the] pivot pin having an end extending externally from said housing and a lever arm extending internally within said housing."). Thus, the Court expresses no opinion on whether SMC's stop is formed on the lever arm, as defined, because that is an infringement question reserved for the jury.

The final point of disagreement is construction of the term "internal." The dispute is central because SMC argues that its stop is external, while Plaintiff argues that since SMC's "external" stop is covered by a plate, it is actually

internal. Defendant argues that "internal" should be limited to the hollow between the two bifurcated halves of the housing. Plaintiff, on the other hand, asserts that "internal" should be given its ordinary meaning, and the term should be construed as "[i]n some way encased by the enclosure to protect from the environment the surrounding enclosure."

"[A]s a general rule, all terms in a patent claim are to be given their plain, ordinary and accustomed meaning to one of ordinary skill in the relevant art." *Rexnord v. Laitram Corp.*, 274 F.3d 1336, 1342 (Fed. Cir. 2001). However, it is also the case that "a patentee may choose to be his own lexicographer and use terms in a manner other than their ordinary meaning, as long as the special definition of the term is clearly stated in the patent specification or file history." *Vitronics*, 90 F.3d at 1582. The patentee did not choose to do so here because there is nothing in the claims, prosecution history, or specification that defines "internal" in a special way or adds anything to the common understanding of the word. Thus, the Court finds that "internal" has its ordinary meaning to one skilled in the art.

The Court notes that the above ruling does not resolve what the parties really want to know – whether SMC's stop is internal or external. Defendant places great emphasis upon the phrase used in the specification that states "a

bifurcated housing attached to the cylinder provides a closed enclosure. ..," Col. 2, Lns. 10-13, and that the lever arm "extend[s] internally within said housing," concluding that demonstrates that only the hollow area between the two halves can be internal. While such a reading of the phrases is possible, neither phrase compels a conclusion that Defendant's interpretation is correct. In fact, neither phrase sheds much light at all on whether a structure (such as a stop) located in the housing's wall is internal or external. Similarly, the Plaintiff's proposal, that "internal" is anything that protects the mechanisms from the environment, is also plausible, but it does not have specific support the intrinsic evidence either. Consequently, the Court declines to decide whether the SMC's stop is internal or external. Whether the SMC stop fits within the ordinary meaning of the word internal is a question of fact for the jury. In addition, for the Court to decide the issue would require reference to the accused device, which is not permitted. SRI Int'l v. Matsushita Electric Corp., 775 F.2d 1107, 1118 (Fed. Cir. 1985) ("It is only after the claims have been construed without reference to the accused device that the claims, as so construed, are applied to the accused device to determine infringement.") (emphasis in original). Therefore, it will be up to a jury to determine whether SMC's removable plate creates an internal or external stop.

B. **'462 Patent**

Plaintiff alleges that the Defendant has infringed Claims 1-4 and 7 of the '462 patent. However, the parties have sought the Court's interpretation on only one phrase of the '462 patent – "resetting means."

The parties agree that the "resetting means" is expressed in means-plus-function language and is, therefore, subject to 35 U.S.C. § 112, \P 6. The statute allows claims that recite a function to be performed rather than specifically defining the structure or materials for performing the function. Applying § 112, \P 6, then, "requires both identification of the claimed function and identification of the structure in the written description necessary to perform that function." *Micro Chemical, Inc. v. Great Plains Chemical Co., Inc.* 194 F.3d 1250, 1258 (Fed. Cir. 1999).

An element in a claim for a combination may be expressed as a means or step for performing a specified function without the recital of structure, material, or acts in support thereof, and such claim shall be construed to cover the corresponding structure, material, or acts described in the specification and equivalents thereof.

¹¹ The description of the "resetting means" varies only slightly among the allegedly infringing claims, Claims 1-4 and 7:

[•] Claim 1 states "means . . . for resetting said converting means toward said first position when said resetting means is in said extended position."

[•] Claim 2 states "means, separate from said linear actuator, for resetting said converting means toward said first position."

Claim 3 states "means, separate from said linear actuator, for resetting said converting means toward said first position and limiting the travel of said linear actuator in said second position."

[•] Claim 4 and Claim 7 are the same as Claim 2.

¹² Title 35 U.S.C. § 112, ¶ 6, in its entirety, states:

The parties agree that the function of the "resetting means" is to disengage the clamp after it has been in the locked position. With the function identified, the Court turns to the area of disagreement – definition of the corresponding structure. *Micro Chemical*, 194 F.3d at 1258 ("After identifying the function of the means-plus-function element, this court looks to the written description to identify the structure corresponding to that function."). To resolve the dispute, the Court examines the description in the specification and any "equivalents thereof." 35 U.S.C. § 112; *Chiuminatta Concrete Concepts, Inc., v. Cardinal Industries, Inc.*, 145 F.3d 1303, 1308 (Fed. Cir. 1998).

Defendant SMC proposes the following interpretation of the structure for the resetting means:

[A] reciprocal member may utilize any geometry which allows the reciprocal member to be slidably disposed within the wall of the housing while engaging the linkage mechanism internally and providing access to the reciprocal member externally.

(D's Exh. 99, slide 21D). Plaintiff Norgren, on the other hand, proposes the following interpretation:

Any means or member of any geometry, separate from the linear actuator, which may move the converting means by presenting an accessible contact surface outside the housing."

(P's Supp. Brief at 10).

The Defendant states that its interpretation is compelled by the

specification's language, which states:

It should be noted that the present invention is not limited to a reciprocal number 80 having a cylindrical body 86 and ends 88, 90, but rather, the reciprocal member may utilize any geometry which allows the reciprocal member 80 to be slidably disposed within the wall 84 of the housing 24 while engaged the linkage mechanism internally and providing access to the reciprocal member 80 externally.

'462 patent, Col. 7, Lns. 42-49 (emphasis added).

The Defendant argues that the patentee is free to define any equivalents he or she desires, and the patentee took advantage of that rule here. Thus, the Defendant argues that each of the three limitations mentioned in the specification, containing the patentee's own definition of equivalents, should be included in the structural definition: (1) slidably disposed within the wall, (2) engaging the linkage mechanism internally, and (3) providing access to the resetting means externally. Defendant asserts that Plaintiff's version omits requirements 1 and 2.

Before going any further, despite Defendant's argument to the contrary, the Court notes that the Plaintiff does not seem to object to Defendant's second limitation, engaging the linkage mechanism internally, leaving only the dispute over "sidably disposed." ¹³

¹³ This is evident for two reasons. First, at oral argument, the Plaintiff stated that the resetting means "is any means which performs the function of reset and that if it's engageable with the internal linkage mechanism, if it is accessible from the outside of the housing, and if it presents an element that you can use to reset, to push on the internal part of the housing" (Trans.

As for the merits of Defendant's argument, the Plaintiff responds, first, that § 112, ¶ 6 does not permit incorporation of structure from the specification beyond what is necessary to perform the claimed function, citing *Micro Chemical*, 194 F.3d at 1258 ("[t]he statute [does not] permit incorporation of structure from the written description beyond that necessary to perform the claimed function."). Thus, under the *Micro Chemical* case, the Plaintiff argues that since "sidably disposed" is not required to perform the function of "resetting said converting means towards said first position," it cannot be read into the claim.

In reply, the Defendant asserts that means-plus-function claims, unlike other claims, are <u>required</u> to be read in light of the specification. In support, the Defendant cites *Kahn v. General Motors Corp.*, 135 F.3d 1472, 1476 (Fed. Cir. 1998), which states:

Unlike the ordinary situation in which claims may not be limited by functions or elements disclosed in the specification, but not included in the claims themselves, in writing a claim in meansplus-function form, a party is limited to the corresponding structure disclosed in the specification and its equivalents.

At the outset, the Court recognizes that the language in *Micro Chemical* suggests Plaintiff is right, while the language from *Kahn* cited by Defendant is

at 6). Second, and most conclusively, the Plaintiff stated in its reply brief that "[t]he sole issue which has remained in contention . . . is whether the claim interpretation . . . should include the limitation "sidably disposed." (P's Reply Brief at 3).

equally persuasive. Defendant initially argued that Plaintiff's position was mistaken because this is a means-plus-function claim, where the Court is expressly supposed told to examine the specification for the corresponding structure. However, even in a means-plus-function context, the *Micro Chemical* court cautioned against allowing the specification to conflict with the claims. It appears that Judge Dyk was correct when he stated in concurrence that:

The problem is that our decisions provide inadequate guidance as to when it is appropriate to look to the specification to narrow the claim by interpretation and when it is not appropriate to do so. Until we provide better guidance, I fear that the lower courts and litigants will remain confused.

SciMed Life Systems, Inc. v. Advanced Cardiovascular Systems, Inc., 242 F.3d 1337, 1347 (Fed. Cir. 2001).

However, despite the apparent contradiction, after review of the language of the '462 patent specification, the Defendant's position prevails. The specification explicitly states that the "resetting means" is not limited to the "reciprocal member 80." The specification then goes onto define what else could be used in place of "reciprocal member 80:"

the reciprocal member may utilize any geometry which allows the reciprocal member 80 to be slidably disposed within the wall 84 of the housing 24 while engaged the linkage mechanism internally and providing access to the reciprocal member 80 externally.

Col. 7, Lns. 44-49. The specification does not say 'here are some structures, but other structures would work too.' Instead, the patentee, as is his right, specifically and deliberately broadened the scope of "resetting means" by describing the other structures that "resetting means" could take. Consequently, he is stuck with his own definition of the other structures. Therefore, the Court concludes that the specification explictly what structure is minimally required to be a "resetting means," and it includes the three limitations identified by the Defendant.

Plaintiff's second argument is that the Doctrine of Claim Differentiation presumes that every claim has a different scope. As a result, since Claim 8 includes "sidably disposed" and Claim 1 does not, the Plaintiff asserts that "sidably disposed" cannot be read into the structure. In support, the Plaintiff cites Wegner Manufacturing, Inc. v. Coating Machinery Systems, Inc., 239 F.3d 1225 (Fed. Cir. 2001), which states,

Although the judicially created doctrine of claim differentiation cannot override the statutory requirements of § 112, ¶ 6, Laitram Corp. v. Rexnord, Inc., 939 F.2d 1533, 1538, 19 USPQ2d 1367, 1371 (Fed.Cir.1991), it does not necessarily follow that meansplus-function limitations must be interpreted without regard to other claims. Claim differentiation, while often argued to be controlling when it does not apply, is clearly applicable when there is a dispute over whether a limitation found in a dependent claim should be read into an independent claim, and that limitation is the only meaningful difference between the two claims.

Wenger Mfg., Inc. v. Coating Machinery Systems, Inc., 239 F.3d 1225, 1233 (Fed. Cir. 2001).

Despite the above language, claim differentiation does not usually apply to means-plus-function claims. Rather, "claims that are written in the form authorized by section 112 paragraph 6 are by statute limited to the structure described in the specification and equivalents of that structure." C.R. Bard, Inc. v. M3 Systems, Inc. 157 F.3d 1340, 1364 (Fed. Cir. 1998). In the case cited by Plaintiff, Wenger, the Federal Circuit was quick to add that a plaintiff could not avoid the requirements of § 122, ¶ 6 by "the mere addition of a dependent claim" that recites the corresponding structure disclosed in the specification." Wenger, 239 F.3d at 1234. The Wenger court then emphasized that reference to other claims is especially appropriate where the dependent claim recites a separate and distinct function. Since Claim 8 does not have a separate and distinct function, this case is distinguishable from Wenger, and the Court will not apply the Doctrine of Claim Differentiation here. Instead, the Court will rely on the usual rule that the doctrine does not apply to means-plus-function claims.

Therefore, in conclusion, the Court adopts Defendant's proposed construction of "resetting means" because it takes into account each of the three limitations required by the specification. Plaintiff's proposal, on the other hand, is

a valiant attempt to broaden the specification's own definition, but it is

contradicted by the specificity with which the patentee defined other forms the

"resetting means" could take. Thus, the "resetting means" structure is:

any geometry which allows the reciprocal member to be slidably

disposed within the wall of the housing while engaging the linkage mechanism internally and providing access to the

reciprocal member externally.

IV. CONCLUSION

For the reasons stated above, in the '973 patent, the Court declines to

interpret the term "stop" because the parties do not disagree on its meaning,

construes the "lever arm" as being "an elongated element having a pivoting end, a

moment arm, and an actuating end," and finds the term "internal" has its ordinary

meaning.

In the '462 patent, the Court finds that the "resetting means" structure is

"any geometry which allows the reciprocal member to be slidably disposed within

the wall of the housing while engaging the linkage mechanism internally and

providing access to the reciprocal member externally."

IT IS SO ORDERED.

_____/s/____

ARTHUR J. TARNOW

Dated: May 7, 2003 UNITED STATES DISTRICT JUDGE

Page 18 of 18